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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,268

03/17/2005

Wolfgang Rohde

LU 6051 (US)

4136

34872

7590

07/02/2007

BASELL USA INC.

INTELLECTUAL PROPERTY

912 APPLETON ROAD

ELKTON, MD 21921

EXAMINER

TESKIN, FRED M

ART UNIT

PAPER NUMBER

1713

MAIL DATE

DELIVERY MODE

07/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,268	ROHDE ET AL.	
	Examiner	Art Unit	
	Fred M. Teskin	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 7 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050427</u> . | 6) <input type="checkbox"/> Other: ____. |

The preliminary amendment of March 17, 2005 having been entered, claims 1-20 are currently pending and under examination herein.

Regarding the Information Disclosure Statement filed April 27, 2005, while all cited references have been considered, it is noted that the "McDaniel" citation is not in compliance with MPEP 609.04(a) due to omission of a date of publication. Applicants are requested to supply the publication date for this citation in response to this Office action.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8, 10-12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/0017617 (Schuth *et al*).

Schuth *et al* disclose a method for determining properties of a material library, the method including the steps of (i) coating substrate channels with catalyst and/or

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catalyst precursor (in the form of solutions, emulsions and/or dispersions); (ii) bringing the substrate to the desired reaction temperature and then passing a fluid starting material through or along the substrate; and (iii) analyzing the reaction product in the resultant effluent (paragraphs 0095-0097). The substrate channels are preferably included in a parallel tube-bundle reactor (see paragraph 0031 and Fig. 2), and the catalyst and/or catalyst precursor may be subjected to thermal treatment at a temperature defined by a range (20 to 1500°C) fully embracing of the presently claimed range, to dry and (if appropriate) sinter or calcine such materials (see paragraphs 0049-0052).

Application of the disclosed method to selecting polymerization catalysts is not specifically mentioned. However, the Schuth *et al* invention is said to permit automated production and catalytic testing for the mass screening of, e.g., heterogeneous catalysts for chemical reactions (see paragraph 0100), suitable examples of which include addition reactions and polymerizations as mentioned in paragraph 0102.

Thus, to an ordinarily skilled practitioner seeking to screen potential polymerization catalysts, it would have been obvious at the time of applicants' invention to undertake the method of Schuth *et al* by subjecting catalyst precursors to candidate polymerization catalysts to the described thermal treatment in a parallel array of reactors and utilize a fluid starting material including monomer reactants suitable to produce the desired polymer product(s) with the aid of such catalysts, and then analyze polymer properties of interest. Those of ordinary skill would have so undertaken the

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disclosed method with a reasonable expectation of success in selecting viable polymerization catalysts for particular polymer product(s) under consideration.

Claims 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/44801.

WO '801 describes an array of parallel reactors, each reactor having a bed of catalyst operating in a fluidized bed mode; see page 4, final paragraph, page 6, first full paragraph and Fig. 2, which depicts an individual reactor as including the requisite elements of the applicants' reactor as claimed [claim 13, subparagraphs a), b) and c)]. In particular, frit 208 of Fig. 2 is seen to correspond to "bottom (10)" of present claim 13 and, hence, the depicted reactor appears to have no "internals" restrictive of flow, as claimed. But in any event, WO '801 states, in reference to Fig. 2, that the catalyst bed may be located above frit 208 (see page 10, first full paragraph), and in fact such a catalyst/frit arrangement is shown in Fig. 5d.

As to the process steps recited in present claim 13, it is noted that recitation of an intended use of a claimed apparatus must result in a structural difference between the claimed apparatus and the prior art in order to patentably distinguish the claimed apparatus from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Here, the claim recitations with respect to the intended manner of implementing the claimed apparatus do not differentiate the claimed apparatus from the prior art apparatus since the latter teaches all the structural

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limitations of the claim. See, *Ex parte Masham*, 2 USPQ2d 1647 (BPAI 1987) and MPEP 2114.

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/44801.

The discussion of WO '801 set out in the preceding rejection is incorporated herein by reference.

Regarding claims 16 and 17, modifying each reactor of the array of WO '801 to include the requisite temperature control units would have been obvious to one of ordinary skill in the art given the teaching therein that "[a]ll the beds may be maintained at the same temperature, or individual beds may be set and maintained at different temperatures. The array may also be divided into sections with each section being operated at a different temperature." (See page 6, final paragraph.) To that end, the inclusion of a control unit to control temperature of the feed stream to each reactor based on the desired bed temperature would have been a conventional expedient, well within the realm of ordinary skill.

Regarding claim 18, Official notice is taken of the fact that the recited materials, e.g., stainless steel, are well known in the reactor design art as construction materials. Therefore, to one of ordinary skill in that art, it would have been an obvious material choice to select such material as stainless steel, for instance, for constructing the fluidized bed reactors of WO '801.

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The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Diamond et al is cited as pertinent to methodology for screening arrays of potential catalysts to identify useful polymerization catalysts.

Claims 7 and 9 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Regarding claim 7, application of the claimed pretreatment step to a Phillips catalyst is not disclosed nor adequately suggested in the available prior art.


Regarding claim 9, the claimed feature of producing a fluidized bed of catalyst in the respective reactor (for at least one of the pretreatment step and the polymerization step) is not disclosed nor adequately suggested in the available prior art.

Any inquiry concerning this communication should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FRED TESKIN
PRIMARY EXAMINER
1713

FMTeskin/06-20-07